

AMENDMENT TO THE CLAIMS

1. (Currently Amended) A method of manufacturing an electron-emitting source, comprising the steps of:

forming a fluffy film containing curled and entangled nanotube fibers on a substrate, each of the curled and entangled nanotube fibers having one end connecting to the substrate; and

irradiating the film formed on the substrate with a laser beam perpendicularly to the substrate, wherein the step of irradiating includes the steps of creating a plurality of curled and entangled nanotube fibers on the substrate from at least one of the curled and entangled nanotube fibers by the laser beam and forming a surface of the fluffy film with a uniform height from the substrate, each of the plurality of the curled and entangled nanotube fibers having a free end serving as an emission site.

2. (Original) A method according to claim 1, wherein the step of forming includes the step of forming a film of the nanotube fibers made of carbon.

3. (Original) A method according to claim 1, wherein the step of forming includes the step of forming the film in accordance with any one scheme selected from electrodeposition, thermal CVD, and spraying.

4. (Original) A method according to claim 1, wherein the step of forming includes the step of forming the film on the substrate made of iron or an iron-containing alloy.

5. (Original) A method according to claim 1, wherein the step of irradiating includes the step of irradiating with the laser at an energy density of 5 mJ/cm^2 to 500 mJ/cm^2 .

6. (Original) A method according to claim 1, wherein the step of irradiating includes the step of irradiating the film with an excimer laser as the laser.

7. (Original) A method according to claim 1, wherein the step of irradiating includes the step of irradiating the film with the laser in any one atmosphere selected from air, gas, and vacuum.

8. (Currently Amended) A method of manufacturing an electron-emitting source, comprising the steps of:

forming a fluffy film containing curled and entangled nanotube fibers on a substrate, each of the curled and entangled nanotube fibers having one end connecting to the substrate; and

irradiating the film on the substrate with a laser beam perpendicularly to the substrate; and

forming a surface of the fluffy film with a uniform height from the substrate by the laser beam, ~~wherein the step of irradiating increases the number of the entangled nanotube fibers having a free end and reduces a peak current density emitted by the entangled nanotube fibers, the peak current density measured at measurement points located at a predetermined interval in both X and Y directions of the substrate.~~

9. (New) A method of manufacturing an electron-emitting source, comprising the steps of:

forming a fluffy film containing curled and entangled nanotube fibers on a substrate, each of the curled and entangled nanotube fibers having one end connecting to the substrate;

irradiating the film formed on the substrate with a laser beam perpendicularly to the substrate; and

disconnecting the curled and entangled nanotube fibers on the substrate by the perpendicular laser beam to increase the number of free ends of the disconnected curled and entangled nanotube fibers on the substrate and to form a surface of the fluffy film with a uniform height from the substrate, each of the free ends of the disconnected curled and entangled nanotube fibers serving as an emission site on the substrate.